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Andrea Meier

SUMMARY. Human service professionals have begun to explore the Internet's potential as a therapeutic medium for individuals, families and groups, but we still know very little about the ways that Internet-mediated communication affects interventions. This paper uses examples from a recent study of a short-term, listserv-based support group that helps social workers cope with job stress to discuss issues related to the use of online support groups. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <http://www.haworthpressinc.com>]*

KEYWORDS. Online support groups, job stress, social workers

INTRODUCTION

Human service professionals in many disciplines have benefited from the Internet's flexibility and speed as a communication channel.

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The author extends her appreciation to the 52 participants in the study who took the risk of volunteering to participate in an untried intervention, and especially to the 19 members who completed the study.

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Recently, they have begun to explore its potential as a therapeutic medium. Some have begun to offer individual, family and group counseling using e-mail (Ainsworth, 1999; Colon, 1998; Markowitz, 1999; Osterman, 1997). Self-help organizations have established online groups to enable members to stay in touch with each other (Hensley & Hensley, 1999; Medara, 1999). Despite the excitement over the Internet's potential benefits, we currently know little about designing effective interventions that incorporate this new technology. To make the best use of these innovations on behalf of consumers, human service professionals need to be knowledgeable about how the forms and contexts of online support groups are changing and the ways that they are being used as interventions. This paper reviews research on online support groups and discusses issues in the systematic design and implementation of online group interventions targeted at a specific group, social workers with occupational stress.

All online groups are referred to generically as "forums," but groups may be organized as "newsgroups," "bulletin boards," "conferences," "mailing lists," "discussion groups," or "chat groups" (Internet.com, 1999). Members of newsgroups, bulletin boards, mailing lists and conferences communicate without having to be online at the same time ("asynchronously"). Chat group participants communicate in "real time" ("synchronously"), so they must all be online at the same time to read each other's messages.

These Internet-mediated communication technologies have enabled the development of a variety of group social structures and interaction styles to suit the preferences of different users (see Figure 1). Each type of communication has its advantages and disadvantages. Members of groups using asynchronous communication can write messages of unlimited length and explore issues in depth because they do not compete with each other for "air time." Chat group members enjoy the immediacy of the responses they can get from other group members "real time" (Southwick, 1999). Members of groups that use asynchronous communication must be able to cope with the uncertainty over who will respond to their messages and the timing of those responses. Chat group members must learn how not to be distracted when multiple strings of text appear on their screens as several members reply simultaneously. They also have to be satisfied with conversations that are lively but cover subjects in less depth (Southwick, 1999).

FIGURE 1. Features of Online Groups: Technology and Social Structure

	Type of Group			
Group Characteristic	**Newsgroups**	**Bulletin boards & conferences**	**Listservs**	**Chat Groups**
Timing of communication	Asynchronous	Asynchronous	Asynchronous	Synchronous ("real time")
Access to messages	Usenet host computer	Internet Service Provider's host computer, or website	Messages sent to host computer are automatically distributed to listserv subscribers	Requires users to have special software for "real time" interactions
Moderated or unmoderated	Both	Both	Both	Both
Membership	Open membership	Open membership	closed or open membership	closed or open membership
Group size	Unlimited	Unlimited	Range widely in size	Up to 12 people
Designated group facilitator?	No	Usually do not have designated facilitators; May have visiting experts participate to answer questions	Usually do not have designated facilitators	Usually do not have designated facilitators; May have visiting experts participate to answer questions
Type of "session"	Ongoing; 24-hour access	Ongoing; 24-hour access	Ongoing; 24-hour access	Scheduled; time-limited

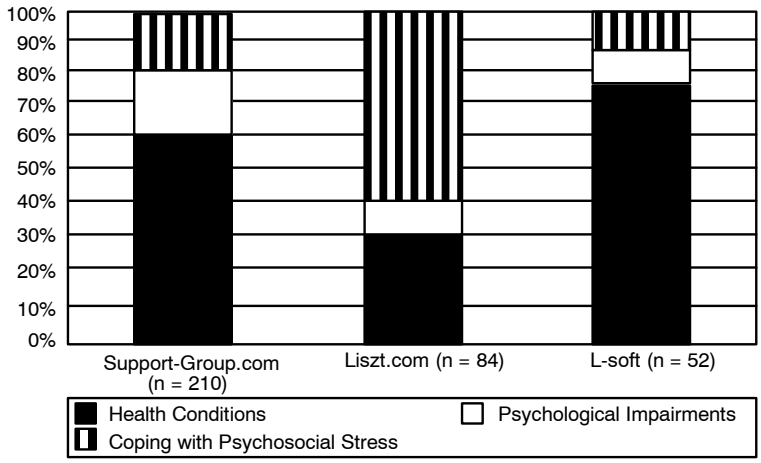
No single Internet registry catalogs online groups, so obtaining an accurate count of the number of online groups is difficult. To obtain an up-to-date count of the number of listservs, the author conducted a search for listservs over the Web using the L-Soft search engine (www.lsoft.com/catalist.html) to find all listserv groups that used List-Soft's proprietary listserver software. This search identified over 151,000 such groups, of which 24,352 were accessible to the public (L-Soft International, 1999). Liszt.com (*www.liszt.com/news*), another Web search engine used to find online groups, currently links users to 30,000 Usenet newsgroups and 25,000 chat groups (Liszt.com, 1999). In addition to all of these, there are many groups that are accessible

only to America On-Line® (AOL), Compuserv®, or other commercial Internet service subscribers.

All groups offer members companionship and opportunities to share ideas and information about common interests (Northen, 1988). Social support groups provide members opportunities for emotional ventilation and validation in addition to these other functions (Schopler & Galinsky, 1993). Researchers have begun to distinguish two different types of social support groups (Humphreys & Rappaport, 1994). Mutual aid groups are organized by members who recognize that they have a problem in common. The help they offer is reciprocal, so, over time, all members play both helper and helpee roles. Mutual aid groups do not have professional facilitators while support groups are professionally organized and/or professionally led.

Based on these definitions, how many online groups are support groups? In April 1999, the author's keyword search using the descriptor "support group" on three Web search engines produced lists of listserv groups, bulletin boards and conferences that ranged in size from 210 groups to 52 groups (see Figure 2). Most of these groups appear to be mutual aid groups rather than support groups. While some may have expert participants to answer members' questions and list owners who will intervene if members become unduly provoc-

FIGURE 2. Variability in Results of WWW Searches for Online Support Groups



ative in their messages, there are few online social support groups with active, ongoing professional facilitation (King & Moreggi, 1998).

Online social support groups can be categorized according to the problems they address, such as diseases and physical impairments, psychological disorders (including addictions), and coping with psychosocial stress. The three Web search engines had different search protocols, so the lists of listserv groups, bulletin boards, and newsgroups they produced varied widely within in each of these three categories (see Figure 2). Overall, health-related groups were found most frequently and those focusing on psychological disorders were found least often.

Accessing online support groups. Until recently, most people subscribed to Internet services so they could use e-mail. In the past two years, however, ''surfing'' the World Wide Web has become the most common way of using the Internet (Graphic Visualization & Usability Center, 1998). As the survey of online support groups above demonstrates, the Web has also made it much easier to find online support groups, increased the number and types of communication channels, and expanded the range of available services and content. Some self-help organizations, such as Alcoholics Anonymous, GriefNet, and 4SelfHelp.com, have made it easy to access support through their Web sites. Many sponsor topic-focussed discussion forums and/or chat groups, and provide links to reliable sources of information (Alcoholics Anonymous, 1999; GriefNet, 1999).

RESEARCH ON ONLINE SUPPORT GROUPS

Technological advances are spurring human service providers to invent innovative ways to use online groups to benefit clients. Social group work researchers who wish to systematically investigate the feasibility, appropriateness, and effectiveness of different kinds of online groups are challenged to keep up with the innovations that are going on all around them. Technological developments consistently outpace researchers' ability to study their processes and impacts (Eng, Gustafson, Henderson, Jamison, & Patrick, 1999). While there is great interest in the therapeutic use of online groups, the review of the literature shows that this field of research is clearly in the early stage of its development.

To date, relatively few articles on online support groups have been

published in conventional or online professional journals. Those reports that have been published address widely scattered topics. Some have surveyed online therapeutic group resources (Cutter, 1996; Stofle, 1999), or reviewed issues in the use of online groups in human service practice (Bowman & Bowman, 1998; King & Moreggi, 1998; Schopler, Abell, & Galinsky, 1998; Stofle, 1999). Studies of specific groups have drawn from such diverse populations. Berman, (1996) and Meier (1997; 1999) both studied groups composed of social workers. Some researchers have studied groups of people who are living with life-threatening, physical conditions such as cancer (Fernsler & Mancester, 1997; Weinberg, Uken, Schmale, & Adamek, 1995), amyotrophic lateral sclerosis (Feenberg, Licht, Kane, Moran, & Smakith, 1996) or HIV (Gustafson et al., 1999). Others have studied groups composed of people coping with emotional difficulties, such as obsessive-compulsive disorders (Stein, 1997), and survivors of alcoholic families (Phillips, 1996) and sexual abuse (Berman, 1996; Finn & Lavitt, 1994). Some investigators have done studies with different kinds of existing groups (Finn, 1996; Finn & Lavitt, 1994; Stein, 1997), or on groups that they themselves have facilitated (Colon, 1998; Meier, 1997). Most of the groups studied were listservs, possibly because listserv technology has been in existence longer than chat group software. A few have compared Internet-mediated (IM) support groups to face-to-face (FTF) groups (Cutter, 1996; Phillips, 1996).

We know little about the relative benefits and risks of participation in online groups. We do know that online groups can make it easier for people to obtain support if (a) they live in rural areas, (b) have restricted physical mobility, or (c) are homebound because of their caregiving responsibilities, or (d) are living with a rare disease with no access to a nearby community of people coping with the same condition (Colon, 1998; International MS Support Foundation, 1999; White & Madara, 1999). Online support groups can provide their members with many kinds of support such as (a) opportunities for emotional ventilation and validation (Fernsler & Mancester, 1997; Meier, 1999; Winzelberg, 1997), (b) information from other members and encouragement to seek out FTF therapies (Stein, 1997; Winzelberg, 1997), and, in some groups, (c) access to experts who are brought online to answer specialized questions (International MS Support Foundation, 1999). Some studies have found that participation in online groups is associated with statistically significant improvements, such as reduced stress in teenage mothers (Dunham et al., 1998),

improved quality of life in HIV+ patients (Gustafson et al., 1999), and prolonged sobriety in drug addicts (King, 1994).

Potential Risks

Although human service professionals have expressed their concern with the potential risks and liabilities of online support groups, we still do not have much documented evidence to justify these concerns. To date three main categories of risks have been identified. Some risks arise out of the uncertainty inherent in members' IM self-representations, including the difficulty of (a) verifying that group members are who they claim to be and have not misrepresented their problems (Sagen, 1995, January), and (b) responding with the appropriate kind of direct aid when group members experience crises but do not reside in the same locality (Meier, 1999). Other risks are rooted in the nature of IM interactions. Members may: (a) feel dissatisfied because they do not receive the number and kinds of responses they hope for (Dunham et al., 1998; Meier, 1999); or (b) find that spending a lot of time engaged in Internet-based activities has shrunk their FTF social networks, leaving them more depressed and lonelier than they had been before they joined the group (Kraut et al., 1998). A third type of risk arises from the difficulty of protecting members' confidentiality. Despite the use of group norms for confidentiality and technological procedures to prevent non-members from reading members' messages, online group members' privacy is still vulnerable to (a) invasions by computer hackers and mass mailers ("spammers"), (b) accidental violations due to members' thoughtlessness in leaving onscreen or printed messages where passersby can read them, or (c) their forwarding messages to other online acquaintances without first asking the sender's permission.

This review of the literature suggests that we already know enough about benefits of online support groups to justify further exploration of this kind of intervention. Because almost all of the studies of specific groups mentioned above used small samples and descriptive methodologies, however, it is unwise to generalize from currently available findings. Researchers and professional in the human services clearly need to do more research and accumulate more practical experience if online group interventions are to be integrated into human service practice. Much work is needed to determine which of our assumptions about FTF group composition, structure, process and content are applicable to IM groups. This

study, focusing on a listserv-based support group for social workers, is one of the first to embark on this mission.

ONLINE INTERVENTIONS FOR SOCIAL WORKERS' STRESS

When social workers and their colleagues in the other human service disciplines become overstressed by work, they often minimize or deny their distress. They are ashamed of their vulnerabilities and fearful of the professional consequences of admitting to their problems (Deutsch, 1985; Guy, Poelstra, & Stark, 1989; Swearingen, 1990). The little empirical data available on help-seeking among workers in these occupational categories indicates they are reluctant to seek help for work-related stress and, when they do, they are more likely to seek individual therapy rather than join support groups (Guy et al., 1989; Reamer, 1992).

If human service professionals generally do not participate in FTF stress management support groups, what would make an IM support group more attractive to them? Internet-mediated support groups can provide support in a way that is energy conserving and easily accessible. Members with Internet access from home do not have go elsewhere to obtain support. With asynchronous communication, they do not have to add another event to their overloaded schedules; they can communicate with other group members whenever they choose. Online support groups offer members opportunities to discuss their problems in private without having to engage in more emotionally intense FTF interactions (Phillips, 1996; Schopler et al., 1998).

In this study, the author investigated whether practicing social workers would find a listserv-based group a satisfying and helpful way to explore their job stress and coping issues. Most public listserv groups are ongoing, have open membership, and have no professional leaders. In this case, the intervention protocol was designed to parallel the structure of a conventional FTF stress management group to make it easier to compare FTF and online support groups. In the study, the group lasted only ten weeks. Members were specifically recruited for the group and the group size was limited to 30 members. It was led by clinical social worker who had extensive experience facilitating FTF, job-stress management support groups.

Members of the listserv group interact with each other only through their written messages. In this respect, a listserv support group is

roughly analogous to an intensive journaling workshop (Progoff, 1975). In journal workshops, participants write non-judgmentally about their life experiences and the meanings they ascribe to them. Participants are then invited to share their narratives by reading them aloud to others in the group. As they compose and share their narratives, workshop members reframe their life experiences. According to anecdotal reports, many participants have found that the writing exercises helped to relieve physical and emotional suffering from trauma, increased their sense of control over their lives, and increased their self-esteem (Evans, 1999; Peterson, in press; Progoff, 1975). While journal workshop participants can choose the aspect of their life they want write about, group members in the author's study were asked to focus on their work-related concerns.

Research Questions

Figure 3 describes the research questions posed by this study. These include questions related to the feasibility, process and participant satisfaction of the online group. The study also included an experi-

FIGURE 3. Intervention Feasibility: Research Questions

Feasibility Component	Research Questions
Research Implementation	• Will it be feasible to recruit social workers for a study of online stress management support group using the Internet as the only the communicatons channel? • If so, what are their demographic, socio-psychological, and professional characteristics?
Group Structure, Discussion Content, and Process	• Will members participate enough to sustain a listserv-based support group for 10 weeks? • If a group of social workers is given the chance to discuss the stress they experience at work and how they coped, what do they choose to talk about? • Did the group achieve social cohesion?
Outcomes	• To what extent and in what ways did group provide social support? • To what extent and in what ways were members satisfied with the experience? • To what extent was participation in the group associated with reduced occupational stress and psychological strain, and increased coping resourcefulness?

mental assessment of the strength and direction of the association between participation in the group with degree of occupational stress, psychological strain, and coping.

METHOD

Participants

The first goal of the study was to test the feasibility of recruiting social workers using the Internet as the only communication channel. When the author began to plan this project in April 1997, there was no data available on how many social workers used the Internet. Consequently, there was no way to predict the size of the population, so the recruiting "net" had to be cast widely. Volunteers were recruited nationally by posting announcements about the study to forty-four listserv groups that had a total of 5,727 subscribers. These included twenty-six groups that addressed topics of interest to practicing social workers and eighteen "social work-specific" groups sponsored by NASW or its state chapters.

Selection criteria. This study targeted masters-level social workers who were in full-time practice and who had computers and Internet access at home. There were four reasons for these selection criteria. First, social workers who worked full-time were most likely to be experiencing work-related strain. Second, there were no research funds available to provide participants with computer equipment or pay their Internet access fees, so they had to have already invested in them. Third, it was also impossible to provide hands-on technical assistance in using these technologies, so participants had to be reasonably competent computer and Internet users. It was assumed that participants who had their own computers and were already members of other listserv groups would have the necessary competencies. Fourth, even if participants had Internet access from their computers at work, it was assumed that they would feel less distracted and more comfortable about disclosing personal information writing from home. Participants were specifically asked not to use their work computers to communicate with the group to avoid the ethical conflicts of using office computers for personal use as well as potential violations of confidentiality.

Recruitment activities. Recruitment was a two-stage process. All

social workers who responded to the initial announcements posted to the listserv groups were sent a second e-mail message containing more information about the study and the text of the project's informed consent statement. They were asked to review this information, contact the author by e-mail if they had questions about the project, and then confirm by e-mail that they were still interested in participating. All volunteers who sent back confirmations were sent the two pre-group, paper-and-pencil data collection instruments and a paper version of the study's informed consent statement. Volunteers who completed and returned all of these materials were considered part of the study's participant pool.

The recruiting target was sixty participants. However, the author encountered many delays and obstacles, and ultimately never succeeded in recruiting the entire sample. It took two waves of recruiting messages, in May and again in July, to recruit fifty-two participants. At the end of July, the author stopped all recruiting efforts after she concluded that the risk of losing the people who had already volunteered outweighed the advantages of spending more time attempting to recruit eight more members. At the end of July, these fifty-two participants were randomly assigned to the Intervention Group or a non-treatment Control Group. Intervention Group members participated in the ten-week online support group. Control Group members received no treatment of any kind: they were only required to complete all of the pre-group questionnaires and the post-group standardized stress and coping instrument. Participants were considered to have completed the study if they returned their completed post-group surveys. All those who completed all their questionnaires received a thirty-dollar stipend.

Data Collection

A multistage data collection process was used to collect qualitative and quantitative data. Quantitative data were collected by administering four paper-and-pencil questionnaires. The first two were administered by mail before the group started and the last two immediately after it ended. The qualitative data collected included all e-mail messages related to the recruitment and implementation of the group and the author's field notes, and the Group Leader's process notes. The e-mail messages included all the messages group members sent to the group over the ten weeks; messages they wrote privately to the Group

Leader and the author (who served as the group's technical assistant); and those the Group Leader and author exchanged in their discussions of implementation issues.

Baseline data collection. To characterize the social workers who were Internet users and willing to participate in an online support group, a comprehensive, background information questionnaire (BIQ) was developed for the study. This instrument was administered by mail to all study participants before the group started. It was composed of seventy-nine multiple-choice and Likert-type items used to collect information on members' sociodemographic characteristics; professional education and training; type of employment working conditions and job satisfaction; satisfaction with family relationships and caregiving responsibilities; health and mental health status; and experience with and attitudes toward computers and the Internet.

Members also completed the standardized Occupational Stress Inventory (OSI) prior to the start of the group (Osipow & Spokane, 1987). The OSI is used to measure participants' levels of occupational stress, psychological strain, and coping resourcefulness. It was given at the start of the group and immediately after it ended. All the subscales have acceptable to good reliability with Cronbach alphas ranging between .71 to .94.

Post-group data collection. During the week after the end of the group, Intervention Group members completed a comprehensive satisfaction survey and a second administration of OSI. The satisfaction survey, also developed for this study, contained 83 items. Seventy-five of them were multiple-choice and Likert-type items and eight were open-ended. The multiple-choice questions covered members' satisfaction with: various aspects of the group experience; coverage of various discussion topics; the group's informativeness; the group's discussion format; the perceived helpfulness of the leader and other members; and level of technical support. There were also questions concerning the group's time burden; and members' level of comfort with IM communication. To make it easy for members to respond to the eight open-ended questions about what they liked most and least about the group experience, these questions were sent to them in an e-mail message. The OSI was administered a second time to both the Intervention and Control Groups to determine whether participation in the group was associated with reduced job stress, psychological strain and increased coping resourcefulness levels.

Analytic Strategies

The quantitative data from the background information and satisfaction surveys were analyzed using descriptive statistics. The pre- and post-group OSI data for the two groups were compared using the non-parametric, Wilcoxon-Matched-Pairs Signed Ranks Test. (Significance levels were set at.10 to compensate for the study's low statistical power.) The statistical analyses were performed using SPSS (SPSS Inc., 1993) while the qualitative data analysis application, NUD.IST 4 was used to perform all the qualitative analyses (SCOLARI, 1995).

RESULTS

Intervention Group Composition

The analyses of the background information survey and the initial OSI data were used to answer the second Implementation question about the group members' sociodemographic and work characteristics and the stressors that affected them.

Sociodemographic characteristics. The Intervention Group was primarily female (84%). The median age 43 years, but members ranged in age from 24 to 69 years. Almost all were of European-American descent (95%); one was a Latina. Members were scattered across eleven states with a majority (57%) living on the East Coast. Over two-thirds of the members (68%) were married; a few were divorced (21%). Most had at least one child under the age of 18 (84%) and aging parents (95%).

Job characteristics. Most members were seasoned professionals. The median number of years they had worked in the field was 11.5 years, but their work experience ranged widely, from less than one year to 30 years. Most (79%) worked in private-sector agencies; only a few (21%) worked in publicly funded organizations. Only three (21%) were in private practice. Members' median work-week was 40 hours long, but some members reported that they often worked up to 65 hours per week. The median salary for the group was $37,000, but members' wages ranged between $20,000 and $100,000.

Computer and Internet experience, skills and attitudes. Intervention Group members were active computer and Internet users. Most (89%)

used a computer both at work *and* at home, however, most (79%) only had access to the Internet and the World Wide Web from home. The median amount of time they spent online each week was five hours, but their weekly Internet use ranged from 1 hour to 15 hours. Four members also ran their own online groups and spent the most time online. Almost all the group members (95%) rated themselves as having good to excellent computer and Internet skills. All of them valued both technologies highly as professional tools.

Stressors

Physical health problems. Most members (89%) rated themselves in good to excellent physical health. Six members rated their health as only fair. Although they were working full time, some members reported that they had to cope with physical disabilities and chronic illnesses including sleep apnea and morbid obesity, hypothyroidism secondary to cancer, and irritable bowel syndrome.

Mental health problems. Many members reported that they had been under considerable strain. Nearly half of them (47%) had been treated for depression or anxiety disorders in the past two years. Those members who had received psychological treatment had only participated in individual psychotherapy and received psychotropic medications; none had participated in FTF support groups.

Family stressors. Many members also reported stress from domestic sources. Nearly half of them (47%) were dissatisfied in their relationships with their spouses; nearly the same number (42%) were dissatisfied in their relationships with their parents, and over a quarter (27%) reported troubled relationships with their children. Nearly one-third of the members (32%) reported that they were actively involved in caring for chronically or mentally ill relatives in addition to their routine family commitments.

Professional stressors. Members' answers to the BIQ indicated that many members were experiencing work-related stress. Over a third of the members were juggling two part-time social work jobs. Although nearly all of them used computers at work, over half (53%) reported that the technical training they were provided to use this technology was inadequate. Nearly half of the members (44%) reported they were dissatisfied with the salary they received for their professional work.

Members' pre-group OSI scores provided other evidence of members' struggles with job stress. A majority of members had high scores

on three of the six Occupational Role Questionnaire scales: Role Ambiguity (84%), Role Boundaries (74%) and Responsibility (52%). These scores can be interpreted to mean that a majority of members felt uncertain about what was expected of them in their jobs, frustrated by conflicting supervisor demands, and blocked from achieving their personal and professional aspirations. On the Personal Strain Questionnaire, over two-thirds of the members (68%) scored high on the Vocational Strain scale. High scores on this scale indicate alienation from work, diminished performance, problems with concentration, and increased absenteeism.

On the Personal Resourcefulness Questionnaire, a majority of members had high scores on all four scales, indicating well-developed capacities for using self-care, rational-cognitive strategies, recreation and social support to cope. It is telling that, despite their knowledge and use of these coping strategies, many members were still experiencing problems with occupational stress and psychological strain.

Group Process

Group process refers to the rate and frequency of members' interactions and the extent to which those interactions contribute to the development of group cohesion and the attainment of group goals (Northen, 1998; Toseland & Rivas, 1995). In this study, group cohesion was assumed to be a function of member participation levels, the types of members' interactions with each other and with the Group Leader, and the topic(s) they discussed.

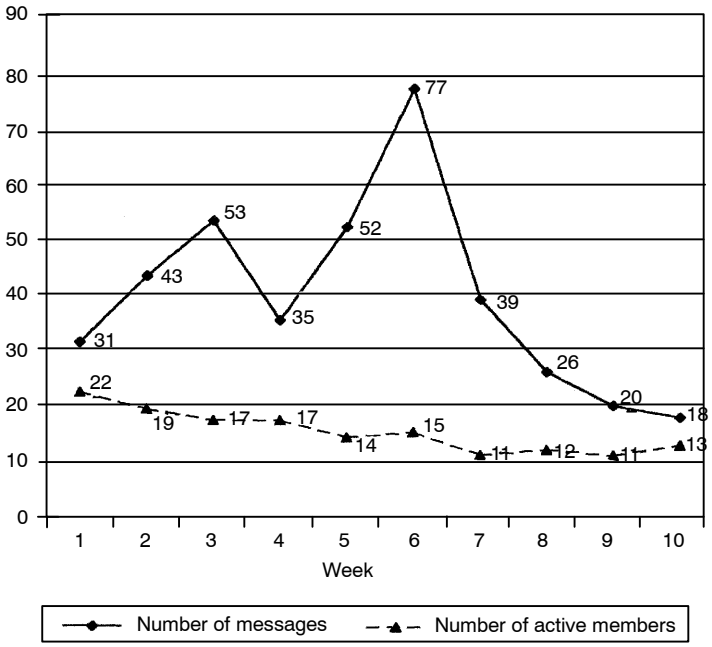
Member participation levels. The first group process question asked whether members would participate enough to sustain a listserv-based support group for 10 weeks. However, no research has been done to determine the minimum number of active members or the rate of messages needed to keep online group members engaged. It was assumed that some minimum number of members had to write in regularly to keep the group viable. To insure that there would be enough activity, members were asked to write at least one message per week. Member activity levels were analyzed in terms of the total number of messages over ten weeks, the number of messages sent each week, and the number of members who sent at least one message per week (e.g., ''active members'').

Members sent a total of 294 messages. The median number of messages sent in a week was 37, but weekly message totals ranged

from seventy-seven in Week 6 to eighteen messages in Week 10 (see Figure 4). The number of active members gradually decreased from twenty-three to eleven over the first 7 weeks, rising again to with thirteen in the final two weeks. In face to face and online groups, some members are always much more active than others (Hare, 1976). In this study, five members (26%) sent 50% of all the messages. Members' participation rates were not uniform over the ten weeks. Some members who wrote only occasionally in the early weeks of the group became more active later on. There was only moderate compliance with the requirement to post at least one message a week. Only 12 members (65%) sent at least one message per week. However, 14 of them (78%) *averaged* at least one message per week.

"Lurkers" vs. Dropouts. Internet-mediated communication poses problems for group leaders who must be concerned with member

FIGURE 4. Comparison of the Total Number of Messages Sent Each Week and the Number of Active Members*



* Active members refers to all members who wrote at least one message in a given week.

retention. Unless members post messages, there is no way to know how they are feeling about the group. Online group members who read others' messages without contributing comments of their own are known as "lurkers." Because of the uncertainty over who was lurking in the group, members were considered to be active unless they explicitly asked to be dropped from the study. Some members did become disengaged and stopped writing when the discussion went in directions that no longer interested them, but only one member asked to be dropped from study.

Lurking is not necessarily a sign of alienation. Some lurking members wrote privately to the Group Leader to say they were too exhausted or sick to write messages to the group, but they appreciated being able to read about other members' experiences. Some others made only minimal contributions in the early weeks of group. They later wrote in their satisfaction surveys they had been overwhelmed by the number of messages and anxious about how they would appear to others. As the number of messages decreased and they become more comfortable with the group's process, these shyer members began writing several messages each week.

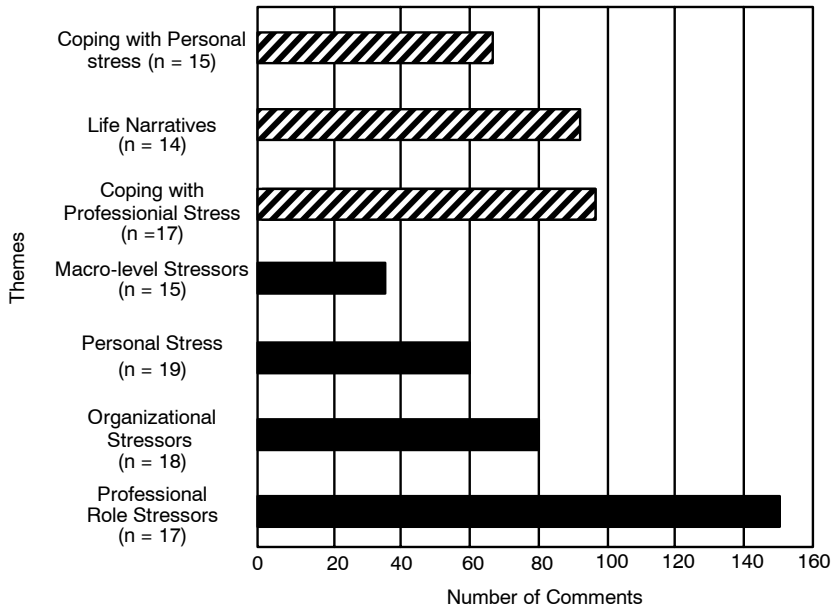
Group Leader's role. All support groups aim to improve members' coping skills and to empower them to solve their own problems. The facilitator supports the group's development by encouraging members to share in setting the group's goals (Northen, 1988). In this study, the Group Leader performed these leadership functions. She also prompted members to explore themes in more depth, raise new concerns, and share their perceptions of the ways that IM communication affected their experience of the group. When participation levels dropped, she asked them to comment on how to make group process more satisfying.

Discussion themes. The study's second question on group process explored what group members chose to talk about in their discussions. The discussion protocol followed a pattern similar to that of a FTF support group. During Week 1, members introduced themselves and discussed group norms for "netiquette" and confidentiality. Over the next three weeks, they described how macro-level changes, agency operations, and professional role characteristics contributed to their job stress, and how they coped. Members varied in the frequency with which they responded to the group's e-mail, so themes from one week were often carried on into discussions during succeeding weeks. After

a sharp drop in the number of messages in Week 4, the Group Leader suggested a mid-term assessment and invited members to discuss how to make the group more satisfying. A lively discussion ensued about the group's process and goals. Afterwards, members decided to shift the focus of the discussion to more personal concerns. While they continued to write about professional role stress issues over the next three weeks, members wrote more about their problems balancing work and family obligations, and their health, marital, and parenting problems. As in FTF groups, members dealt with termination issues during the final two weeks. They discussed what they liked and disliked about the group and their feelings about its ending. Unlike most FTF groups, members were offered the option of continuing on as a leaderless group. During those weeks, members also discussed whether enough of them wanted to keep the group going to make it possible to continue.

The qualitative analyses revealed that the group discussed many different types of stressors and coping strategies (see Figure 5). Members wrote the most comments about professional role stress and coping. Comments about personal, family, and health stressors and coping

FIGURE 5. Stress and Coping Themes: Comment Frequencies



were less frequent, in part because these issues were only raised in the later weeks of the group after a number of members had already withdrawn from the study or had become inactive. The author had assumed that members would write only about current situations and events in their lives. However, the thematic analyses revealed that members also wrote "life narratives" in which they recounted how they had managed to overcome stressful situations in the *past*. These narratives, which increased in frequency until Week 7, often appeared in response to another member's description of a current problem.

Group Cohesion

The third research question on group process explored whether the group was able to achieve social cohesion. This characteristic of viable groups occurs as members get to know each other, discover their shared interests, and learn how to work together to achieve shared goals (Northen, 1988). In cohesive groups, members participate more actively, are more willing to assume leadership roles, and express more satisfaction with the group (Northen, 1988). They are also more likely to show diminished psychological distress, improved self-esteem, and self-confidence (Toseland & Rivas, 1995). In this study, cohesion was considered a surrogate indicator for intervention effectiveness because members of a cohesive support group would also be more likely to experience the psychological benefits of social cohesion that could help to alleviate job strain. In the study, group cohesion was conceptualized as: members' responsiveness to each other; their perceptions of similarity to each other; and the degree to which they wanted to continue on as a group (Northen, 1988).

Member responsiveness. This construct was operationalized as the number of messages in which members commented about each others' messages and members' strategies to make their messages more personal. The Group Leader repeatedly encouraged members to comment on each other's messages so that message senders would know how their messages affected their intended recipients. By Week 2, members began to include comments and the rate of messages using this format increased over time until almost all messages contained such responses. Also starting in Week 2, some members began to include subheadings to cue their readers whether their comments were directed to the group as a whole or to specific individuals. When directing a comment to a specific person, members would begin a new

paragraph with that person's name. Over time, messages with multiple subheads became the norm and, by the end of the group, all members were using this format. In their messages, some members commented that the use of subheads made it easier to know when someone had responded to their earlier messages and made the discussions seem more intimate.

Perceived similarity. In cohesive FTF groups, members perceive each other as similar enough in their experiences to identify with each other's needs and aspirations (Northen, 1988). In the satisfaction survey, members were asked to rate their levels of agreement to five statements about the overall similarity of their experiences to other group members, and the ease with which they could relate to others' work and family experiences, and their mental and physical health problems. Items were based on a 4-point Likert scale from "strongly agree" to "strongly disagree." Only about half of the members (53%) agreed that they perceived their experiences as similar overall. In follow-up questions on more specific kinds of experiences, however, at least two thirds of the members agreed that their experiences with mental and physical health problems and work were similar. A majority of members (58%) agreed that their family experiences were similar.

Despite these indications of solidarity, members in the study had mixed responses to diversity in the group. In their e-mailed responses to an open-ended question in the satisfaction survey, some members wrote that they appreciated learning about the range of social workers' experiences. Private practitioners reported that they had problems relating to the concerns of members who worked in public agencies. Some members felt overwhelmed and helpless when confronted with the crises of the members who were much more emotionally needy.

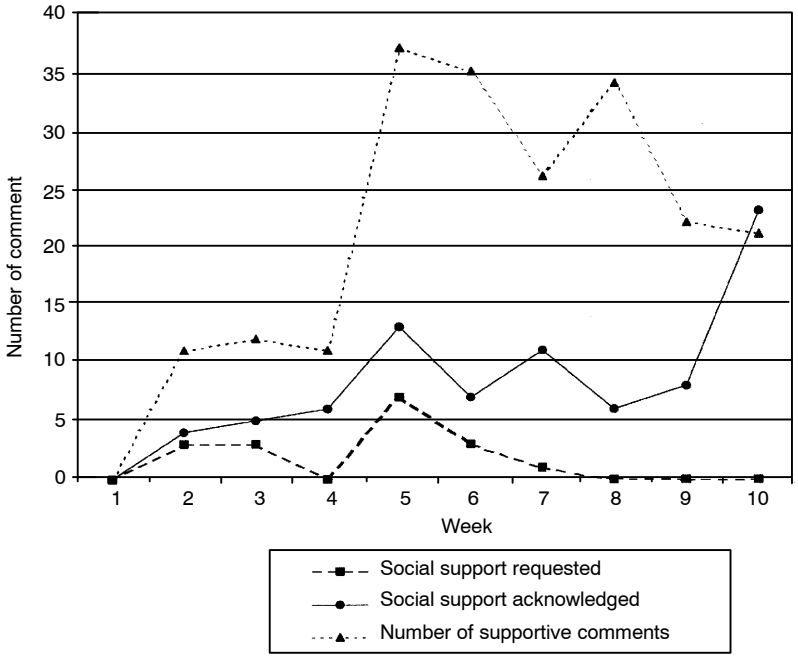
Desire to continue in the group. When members are satisfied with a FTF group, they typically are reluctant to see it disperse (Northen, 1988). In this group, thirteen members (68%) expressed interest in continuing on in the group–among these were several members who had "lurked" for most of the time. These thirteen members later demonstrated their commitment to the group by continuing on for another ten weeks as a leaderless group. These findings confirmed the other two indicators that the group had achieved cohesion.

Outcomes

Social Support. One goal of the group was to provide members with support. The first outcome question examined the extent to which the group achieved this goal. The group's supportiveness was assessed qualitatively using content analyses of members' e-mail messages, and quantitatively on the satisfaction survey. Members' messages were analyzed for the frequency of comments in which they explicitly requested support, offered support, or acknowledged that the support they received had been helpful (see Figure 6). Nine members made a total of 17 requests for support. These requests occurred mostly during the first five weeks of the group and mostly concerned work-related problems. There were a total of 209 supportive comments.

The qualitative analysis found that the more than half of the comments (54%) offered emotional support and validation, slightly more than a quarter (29%) expressed encouragement, while less than one-fifth (17%) offered advice and information. The number of supportive

FIGURE 6. Exchange of Social Support



comments increased dramatically in Week 4 and stayed relatively high for the rest of the group. Members also offered support even when it was not explicitly requested–usually in response to members' reports of their family or health problems. Others in the group commented that they also found this encouragement and advice helpful. These comments may explain the finding that eighteen members wrote a total of eighty-three comments acknowledging the helpfulness of various messages.

In their satisfaction surveys, a majority of members rated the group as helpful in clarifying their professional values (69%) and as a source of useful feedback for improving coping (63%). Members found the group somewhat less helpful as a source of information about resources to enhance coping; only about half of the members (53%) reported that the group was good source of such information.

Members also confronted the real limitations of IM support groups. During Week 8, one member reported that she had just been diagnosed with cancer. Members commented that, although they felt emotionally connected through e-mail, this announcement forced them to realize how geographically distant they were from one another. Many wrote about how frustrated they felt, knowing about the crisis but unable to respond with casseroles and other help that they would have provided to a friend who lived nearby who was experiencing similar problems.

Member Satisfaction

To be feasible, most members must feel satisfied with the group's discussion content and process. In the satisfaction survey, members were asked to rate the strength of their agreement with statements about their satisfaction with different aspects of the group on a four-point scale ranging from "strongly disagree" to "strongly agree." Most members (74%) agreed that they had been satisfied overall with the group and that it had lasted about the right number of weeks (79%). Most members (90%) agreed that having a group leader had been helpful, especially in facilitating the changes in the agenda midway through the group. Over three-quarters of the members (79%) were satisfied with the range of topics discussed, and a majority of members agreed that the appropriate amount of attention had given to 12 out of 13 items listing stress and coping themes. The one topic that a majority of members (58%) felt had not been discussed enough was problems related to computerization in the human services.

Because the group relied on IM communication, it was important that the technology did not act as a barrier to participation. On the satisfaction survey, members rated their agreement to statements on the ease of IM communication. Almost all agreed that it had been easy for them to communicate their thoughts and feelings in writing (90%) and via e-mail (95%). A majority also agreed that they had been comfortable knowing that others in the group could contact them via e-mail (74%) and with being unable see the group members with whom they were corresponding (58%). Members reported in their e-mail responses to the satisfaction survey that they liked the convenience and privacy of being able to participate in the group from home.

Members were not totally satisfied with their experience in the group. On the four-point scale, members rated their agreement to statements that the group's size, volume of messages, and amount of time needed to participate were "about right." Sixteen members (84%) disagreed with the "size of group" item; 14 (74%) disagreed with "number of messages" item; and 8 (42%) disagreed with the "amount of time" item. These responses coincide with findings from the qualitative analysis that members complained repeatedly about how corresponding with the group took too much time because the group was too big and the volume of messages too great.

Stress Reduction Effects

The main purpose of this highly exploratory study was to explore the feasibility of a facilitated, listserv-based support group for social workers, rather than its effectiveness in reducing stress. The small sample size and relatively weak intervention made it unlikely that any effects would be detected. Not surprisingly, analyses of the pre- and post-group OSI data found no statistically significant changes in members' levels of occupational stress, psychological strain, or coping resourcefulness.

DISCUSSION

The Internet's rapid evolution has created opportunities for support group interventions, but it also has sparked a multitude of questions about the nature, feasibility, processes and effectiveness of such inter-

ventions. The author's study examined the factors that contributed to the feasibility of one kind of group, a listserv-based group targeted at social workers. The results show that it was possible to recruit stressed social workers to participate in the study using only the Internet as the communication channel, but also that this type of recruitment process for an online group can be complicated and time consuming. Study findings also support the use of ecological perspectives on job stress. Most participants were experiencing considerable strain from work, including stress caused by computerization of their agencies. Many were also struggling with family and personal problems, but none of them had sought help from face-to-face support. More work is needed to determine how prevalent this combination of stressors and pattern in the use of support services is among social workers.

We still have much to learn about the structure and processes of effective online support groups. In this case, despite a large group and a high volume of mail, the 10-week listserv-based group proved to be feasible. Once the group started, some members became inactive but few members dropped out because they felt alienated from the group. Establishing norms for participation levels helped to insure an adequate flow of messages, but these norms did not need to be rigorously reinforced. In fact, if all members had been regular correspondents, members would have suffered more from message overload than they did. Findings from the study suggest that short-term, listserv-based groups may be similar to FTF groups in that they function better if they composed of approximately twelve members, but more work is needed to confirm whether this size of group promotes adequate participation levels without creating message overload. Study findings also suggest that IM groups are similar to FTF groups in that some members are much more active than others and that individual participation levels change over time. The IM channel enabled exhausted and sick members to stay connected with their peers, and gave shyer members opportunities to ''observe'' the group until they felt safe in joining in the discussion.

When the group shifted emphasis midstream from professional to family and personal concerns, some members became disengaged while others participated more. More research needs to be done to determine how to match different discussion formats with different members' needs. For example, some social workers might be more interested in an IM group that provided them with clinical supervision

as well as opportunities to discuss job stress issues. Others who were experiencing more non-work-related stress may be more attracted to a freeform group in which discussions of work and personal concerns could be interspersed.

A few members had crises that threatened to overwhelm the group's capacity to respond. The background information questionnaire and pre-group OSI identified some members who were experiencing high levels of strain, but other crises could not have been predicted. Future studies need to improve strategies for pre-screening potential group members to help them decide whether an online group would meet their needs, possibly by combining background questionnaires with pre-group, telephone interviews with the Group Leader. These kinds of assessments might also be done online on an individual basis. More extensive pre-group contacts would make it easier for the Group Leader to know in advance which group members are likely to need a lot of direct support or are experiencing major life crises. Further research is needed to determine what background information on members is needed to help the Group Leader facilitate the group, and what methods will work most reliably to collect this data.

Overall, the Group Leader's role in this kind of online group appears to be similar to leadership in a FTF support group. The leader can expedite the initial agenda setting process and help the group modify the agenda as new needs emerge. Leadership activities can include keeping track of who is in the group, reaching out privately to those who become inactive, and encouraging them to stay connected. If a member goes into crisis, the Group Leader can encourage other members to explore their feelings about the situation and acknowledge feelings of helplessness. He or she can then facilitate discussions on how to cope with helplessness, and help members set reasonable expectations for the amount and kind of support the group can provide. In this group, members were more satisfied when the Group Leader used a more egalitarian facilitation style, but this may reflect the fact that many members were experienced group leaders themselves. Future studies need to explore relationships between the Group Leader facilitation styles, member characteristics and member satisfaction.

Members were able to overcome the uncertainty introduced by asynchronous IM communication to form a cohesive group. They were inventive in finding ways to respond to each other's needs for more personalized communication. This group was homogenous in

terms of members' professional training and credentials, but quite heterogeneous in members' work settings, family situations, and health and mental health status. Over the course of the group, some of these differences became problematic. Composing a group is always as much art as science (Northen, 1988) but more research is needed to determine if there are key dimensions in which IM support groups need to be homogeneous.

The group achieved its goal in that most members reported that it provided them with support in coping with work and family stressors. Because social workers are more comfortable offering support than asking for it, it is not surprising that there was an imbalance between the number of requests for help and the number of offers of support. What was unexpected were the high number of comments acknowledging support even when the message was not directed at the person who acknowledged it. For many, simply being able to read other members' narratives about the past and present stressors in their lives and how they coped was helpful. Further studies are needed to determine whether this pattern in the exchange of social support is replicated in other IM groups composed of social workers or other human services professionals.

Although there was strong evidence of social cohesion, comparisons of the pre- and post-group OSI data did not find that participation in the group was associated with changes in members' occupational stress, psychological strain or coping resourcefulness. The lack of positive findings on the OSI may be more indicative of the low statistical power of the study as much as the ineffectiveness of the intervention. Alternatively, lack of change may be a function of measuring too soon after the end of the group. Many members were coping with entrenched and complex situations that would have taken more than the ten weeks to resolve. Further research is needed to determine the reason(s) for lack of positive change in the study's outcome measures. This may be due to deficiencies in the intervention, the appropriateness of the outcome measures, the measurement methods, or the timing of the data collection.

CONCLUSION

The Internet is transforming our personal lives, our work as human service professionals, and the lives of our clients. We need to be on the alert for ways that we can incorporate this technology into practice for

their benefit and for ourselves. As with any innovation, we are attracted by the benefits of IM interventions while the empirical demonstrations of effectiveness and the potential drawbacks take time to become apparent. This study provides examples of both benefits and drawbacks. These mixed findings demonstrate more research is needed to document for whom and under what circumstances online groups are effective interventions. Internet users will undoubtedly continue to form their own groups without the benefit of professional leadership, and professionals will seek to use IM groups as part of their service repertoire. For now, however, human services professionals who use IM groups in their practice or who wish to refer clients to leaderless support groups should consider IM groups an experimental procedure and inform clients of this fact during the recruitment process.

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